shared MPLS network, wherein said first router means VPN information includes a VPN identifier which is assigned to said first router means;

a second router means coupled to the shared MPLS network for dynamically distributing second router means VPN information across the shared MPLS network; wherein said second router means VPN information includes a VPN identifier which is assigned to said second router;

wherein said first and second router means are also configured to establish a plurality of label switched paths therebetween, said label switched paths comprising at least two multipoint-to-point paths and further comprising at least one multi-point to multi-point path; and,

wherein said VPN identifier assigned to said first router is the same as said VPN identifier assigned to said second router.

R E M A R K S

The Office Action dated September 20, 2002 has been considered.

The abbreviations used in independent claims 1, 7 and 19 are now spelled out.

Claims 1-4, 7-10 and 15-18 are deemed pending. Such is inaccurate in that the Office Action of April 11, 2002 deemed claims 11-14 pending, although withdrawn from consideration. The amendment faxed on July 10, 2002 did not cancel claims 11-14 so they remain pending in the patent application at the time the present Office Action issued, albeit withdrawn from consideration. As recognized in the Office Action, claim 11 was further amended. Although claim 11 was considered on the merits, claims 12-14 were not, which failure constitutes an error warranting withdrawal of the Office Action since the Examiner must consider all the claims and not pick just some for examination. As a consequence, withdrawal of the present Office Action is warranted and requested so that the Examiner may consider all the claims on the merits.

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The Examiner finds that amendment of claim 11 in the face of a restriction requirement is impermissible, referring to MPEP 818.01 concerning election becoming fixed after action on the elected claims. The Examiner contends that the applicant cannot at this stage amend a non-elected claim in order to re-admit it into prosecution. However, a newly presented claim reflecting the same content as the proposed claim 11 would be acceptable for consideration purposes and would not be subject to the previous restriction.

While the applicant has canceled claims 11 and 12 and replaced them with new claims 19 and 20 to abide by the Examiner's contention that a "newly presented claim reflecting the same content as the proposed claim 11 would be acceptable for consideration purposes and would not be subject to the previous restriction", the reliance on MPEP 818.01 to deny entry of an amendment to non-elected claims is misplaced. Nothing in MPEP 818.01 prohibits such amendments. While it is true that an election becomes fixed after action on the elected claims, the applicant choose here not to retain the same subject matter in the claims that were part of the non-elected claims. Instead, their subject matter was further amended so as to present claims different from the former claimed subject matter for which the election had become fixed.

No effort is being made to "re-admit" non-elected claims since the subject matter of amended claims 11-14 does not correspond to the subject matter of the previously non-elected claims 11-14. The mere fact that they bear the same numerical claim numbers for convenience is inconsequential; the subject matter of the amended claims are not the same as that of the non-elected claim and thus necessarily are suited for

consideration purposes. Nevertheless, to expedite examination, claims 11-14 were canceled and replaced by new claims 19-22 to avoid the issue entirely.

The abstract of the disclosure was objected to because it has more than one paragraph. Correction is required. In response, a new abstract is added to replace the original. The new abstract is of a single paragraph.

Claims 1-4, 7-10 and 15-18 were rejected under 35 U.S.C. 103(a) as being unpatentable over Rekhter et al (US 6,339,595. This rejection is respectfully traversed.

The independent claims 1, 7 and 19 each recite that a VPN identifier be assigned to a shared network router. In contrast, Rekhter et al. discloses the use of a look-up table to determine where to distribute communications, as opposed to assigning VPN identifiers. The Examiner seems to confuse edge routers CE1 and CE2 of Figs. 1 and 7 of Rekhter et al with data transmissions address D1. There is no VPN identifier assigned to CE1 or CE2. Instead, upon receipt of a data transmission from a router (such as CE1 or CE2), whatever router device receives it determines where to sent it next by referring to look-up table. None of the routers of Rekhter et al. require assignment of a VPN identifier for data routing purposes and thus none are so assigned. Therefore, in contrast to the recitation of the present independent claims, the VPN Identifier assigned to first and second routers is not the same in Rekhter since none are assigned.

On this basis alone, withdrawal of the rejection is warranted and requested.

Independent claims 1, 7 and 19 further call for dynamic distribution of VPN information (as opposed to static distribution). While the Examiner is free to give the broadest reasonable interpretation consistent with the specification, such is no excuse

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to equate a static distribution to be the same as a dynamic distribution of VPN information. Indeed, the mere distribution of an assigned VPN udentifier, even if disclosed in Rekhter which it is not since Rekhter lacks assigned VPN identifiers entirely, would not read on a *dynamic* distribution of the same as recited in pending claim language.

Indeed, Rekhter's reliance on look-up tables to determine where to route information means that its arrangement is necessary predetermined and thus the distribution of information would be static, as opposed to dynamic. The discussion in the present application on page 5 lines 18-28 points out that the need for static routing requiring operator intervention is avoided by dynamically distributing information through its discovery of other routers that support the same VPN and VPN subnets.

Rekhter at col. 6 lines 55-60 specifically envisions forwarding data packets "without requiring that transit routers P1 and P2 also maintain the VPN-specific information that the edge routers store" Indeed, Rekhter employs tags (which are table indexes -- see col. 9 lines 53-54) and notes that in conventional IP forwarding, each router maintains a table (col. 8 lines 56-62). In contrast, by assigning VPN identifiers as recited by the present independent claims, there is no need for routers to continue to maintain such tables since the present independent claims call for dynamically distributing the VPN information.

Thus, on the basis that Rekhter fails to disclose dynamic distributing, each of the pending independent claims are distinguishable.

The Office Action concedes that Rekhter is silent regarding label switching paths which comprise multi point-to-point paths or multi point-to-multi point paths. It is

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submitted on this basis alone also, the Examiner should find the claimed subject matter

patentable. Finding an invention obvious over a solitary prior art reference that is silent

on a claimed feature is contrary to Patent Office regulations.

2143.03 All Claim Limitations Must Be Taught or Suggested

> To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). If an independent claim is nonobvious under <u>35 U.S.C. 103</u>, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

Nevertheless, the Office Action goes on to SPECULATE that:

It appears that such paths exist in the network, as Rekhter discusses both

multicast and unicast situations....fig. 9, discloses what appears to be a multi

point-to-point path (say CE 3, to CE 1), as well as a multi-point to multi-point path

(CE 1 through the service provider network).

Whether or not Rekhter mentions multicast and unicast situations does not ipso

facto mean that label switching paths are present. Indeed, Rekhter specifically teaches

otherwise at col. 34 lines 21-24 by contending that embodiments of Rekther's

"invention" may employ techniques described in four Internet drafts, one of which refers

to label switching, which means the description and drawings of the various

embodiments of Rekhter show networks that do not have label switching characteristics.

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Fig. 9 of Rekhter is a topological diagram used to illustrate inter-VPN communication. (Col. 5 lines 17-18). According to col. 32 lines 2-12 of Rekhter, PE1 and PE2 are edge routers with respect to customer nodes in a first VPN (VPN A). PE3 is an edge router with respect to second VPN (VPN B). According to the diagram of Fig. 1, a single line extends from each of the edge routers PE1, PE2, PE3 to a common service provider network. Further, a single line extends from each of the edge routers PE1, PE2, PE3 to respective ones of customer edge routers CE1, CE2, CE3.

The present independent claims recite subject matter pertaining to a single virtual private network (See Brief Description of the Drawings and col. 5 line 7). Fig. 9 of Rekhter shows two virtual private networks VPN A and VPN B. VPN A has CE1, CE2, PE1, PE2 and D. The Rekhter arrangement, therefore, shows a point to point path only for its VPN A.

In contrast, the present independent claims call for the label switched paths to comprise at least two multipoint-to-point paths and further comprise at least one multi-point to multi-point path (see Fig. 3 of the present application). Clearly, such a complex label switched path arrangement is well beyond Rekhter's disclosure and providing such a complex label switched path arrangement certainly would not be obvious from Rekhter's teaching to a person of ordinary skill in the art.

As a consequence, the Office Action fails to satisfy the burden imposed on the Examiner to establish a *prima facie* case of obviousness. MPEP 2142 provides:

ESTABLISHING A *PRIMA FACIE* CASE OF OBVIOUSNESS

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or

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motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant"s disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP § 2143 - § 2143.03 for decisions pertinent to each of these criteria.

The initial burden is on the examiner to provide some suggestion of the desirability of doing what the inventor has done. "To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985). See MPEP § 2144 - § 2144.09 for examples of reasoning supporting obviousness rejections.

In *In re Kotzab*, the claims were drawn to an injection molding method using a single temperature sensor to control a plurality of flow control valves. The primary reference disclosed a multizone device having multiple sensors, each of which controlled an associated flow control valve, and also taught that one *system* may be used to control a number of valves. The court found that there was insufficient evidence to show that one *system* was the same as one *sensor*. While the control of multiple valves by a single sensor rather than by multiple sensors was a "technologically simple concept," there was no finding "as to the specific understanding or principle within the knowledge of the skilled artisan" that would have provided the motivation to use a single sensor as the system to control more than one valve. 217 F.3d at 1371, 55 USPQ2d at 1318.

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Pages 5 and 6 of the present application provides the following discussion regarding Multipoint-to-point paths and Multipoint-to Multipoint paths:

Two types of LSPs may be used to interconnect PNADs 10 of a VPN: Multipoint-to-point LSPs and Multipoint-to-multipoint LSPs. Each PNAD 10 has a multipoint-to-point LSP directed to it. It is used by all other PNADs 10 for unicast transmissions. All PNADs 10 of a VPN subnet may also be interconnected using a bi-directional, multipoint-to-multipoint LSP. This could be used for sending multicast datagrams. Because this LSP is bi-directional and multi-point-to-multi-point, one such LSP could service an entire VPN subnet, although it is conceivable that multiple LSPs of this type could be employed. Those skilled in the art will recognize that a multipoint-to-multipoint LSP is not strictly required, and that other techniques for multicasting datagrams are available. For example, the point-to-multi-point LSPs from each PNAD 10 in a VPN to all other PNADs 10 in the VPN could be employed for the same purpose. Multicast traffic may include Hello packets, Link State Advertisements (LSA), Address Resolution Protocol (ARP), etc

It is therefore evident that withdrawal of the claim rejection is warranted.

Dated: October 31, 2002   Respectfully submitted,

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